

## RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: 10/665,883  
Source: IFWU  
Date Processed by STIC: 3-7-05

***ENTERED***



IFWO

## RAW SEQUENCE LISTING

DATE: 03/07/2005

PATENT APPLICATION: US/10/665,883

TIME: 10:56:23

Input Set : D:\46699-20011.00 - Seqlist.txt

Output Set: N:\CRF4\03072005\J665883.raw

```

4 <110> APPLICANT: YUAN, Chong-Sheng
6 <120> TITLE OF INVENTION: DETERMINATION OF IONS USING
7   ION-SENSITIVE ENZYMES
9 <130> FILE REFERENCE: 466992001100
11 <140> CURRENT APPLICATION NUMBER: US 10/665,883
12 <141> CURRENT FILING DATE: 2003-09-19
14 <160> NUMBER OF SEQ ID NOS: 18
16 <170> SOFTWARE: FastSEQ for Windows Version 4.0
18 <210> SEQ ID NO: 1
19 <211> LENGTH: 12
20 <212> TYPE: PRT
21 <213> ORGANISM: Artificial Sequence
23 <220> FEATURE:
24 <223> OTHER INFORMATION: 40%-100% identity to leader sequence
26 <400> SEQUENCE: 1
27 Met Gly Gly Ser Gly Asp Asp Asp Asp Leu Ala Leu
28 1           5           10
31 <210> SEQ ID NO: 2
32 <211> LENGTH: 356
33 <212> TYPE: PRT
34 <213> ORGANISM: Artificial Sequence
36 <220> FEATURE:
37 <223> OTHER INFORMATION: 40%-100% identity to the biphosphate nucleotidase
39 <400> SEQUENCE: 2
40 Ala Leu Glu Arg Glu Leu Leu Val Ala Thr Gln Ala Val Arg Lys Ala
41 1           5           10           15
42 Ser Leu Leu Thr Lys Arg Ile Gln Ser Glu Val Ile Ser His Lys Asp
43           20           25           30
44 Ser Thr Thr Ile Thr Lys Asn Asp Asn Ser Pro Val Thr Thr Gly Asp
45           35           40           45
46 Tyr Ala Ala Gln Thr Ile Ile Ile Asn Ala Ile Lys Ser Asn Phe Pro
47           50           55           60
48 Asp Asp Lys Val Val Gly Glu Glu Ser Ser Ser Gly Leu Ser Asp Ala
49 65           70           75           80
50 Phe Val Ser Gly Ile Leu Asn Glu Ile Lys Ala Asn Asp Glu Val Tyr
51           85           90           95
52 Asn Lys Asn Tyr Lys Lys Asp Asp Phe Leu Phe Thr Asn Asp Gln Phe
53           100          105          110
54 Pro Leu Lys Ser Leu Glu Asp Val Arg Gln Ile Ile Asp Phe Gly Asn
55           115          120          125
56 Tyr Glu Gly Gly Arg Lys Gly Arg Phe Trp Cys Leu Asp Pro Ile Asp
57           130          135          140
58 Gly Thr Lys Gly Phe Leu Arg Gly Glu Gln Phe Ala Val Cys Leu Ala

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```

59 145          150          155          160
60 Leu Ile Val Asp Gly Val Val Gln Leu Gly Cys Ile Gly Cys Pro Asn
61          165          170          175
62 Leu Val Leu Ser Ser Tyr Gly Ala Gln Asp Leu Lys Gly His Glu Ser
63          180          185          190
64 Phe Gly Tyr Ile Phe Arg Ala Val Arg Gly Leu Gly Ala Phe Tyr Ser
65          195          200          205
66 Pro Ser Ser Asp Ala Glu Ser Trp Thr Lys Ile His Val Arg His Leu
67          210          215          220
68 Lys Asp Thr Lys Asp Met Ile Thr Leu Glu Gly Val Glu Lys Gly His
69 225          230          235          240
70 Ser Ser His Asp Glu Gln Thr Ala Ile Lys Asn Lys Leu Asn Ile Ser
71          245          250          255
72 Lys Ser Leu His Leu Asp Ser Gln Ala Lys Tyr Cys Leu Leu Ala Leu
73          260          265          270
74 Gly Leu Ala Asp Val Tyr Leu Arg Leu Pro Ile Lys Leu Ser Tyr Gln
75          275          280          285
76 Glu Lys Ile Trp Asp His Ala Ala Gly Asn Val Ile Val His Glu Ala
77          290          295          300
78 Gly Gly Ile His Thr Asp Ala Met Glu Asp Val Pro Leu Asp Phe Gly
79 305          310          315          320
80 Asn Gly Arg Thr Leu Ala Thr Lys Gly Val Ile Ala Ser Ser Gly Pro
81          325          330          335
82 Arg Glu Leu His Asp Leu Val Val Ser Thr Ser Cys Asp Val Ile Gln
83          340          345          350
84 Ser Arg Asn Ala
85          355
88 <210> SEQ ID NO: 3
89 <211> LENGTH: 17
90 <212> TYPE: PRT
91 <213> ORGANISM: Artificial Sequence
93 <220> FEATURE:
94 <223> OTHER INFORMATION: 40%-100% identity to the second bacterial leader
95 sequence
97 <400> SEQUENCE: 3
98 Lys Gly Glu Leu Glu Gly Leu Pro Ile Pro Asn Pro Leu Leu Arg Thr
99 1          5          10          15
100 Gly
104 <210> SEQ ID NO: 4
105 <211> LENGTH: 356
106 <212> TYPE: PRT
107 <213> ORGANISM: Artificial Sequence
109 <220> FEATURE:
110 <223> OTHER INFORMATION: Chimeric protein
112 <400> SEQUENCE: 4
113 Ala Leu Glu Arg Glu Leu Leu Val Ala Thr Gln Ala Val Arg Lys Ala
114 1          5          10          15
115 Ser Leu Leu Thr Lys Arg Ile Gln Ser Glu Val Ile Ser His Lys Asp
116          20          25          30

```

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```

117 Ser Thr Thr Ile Thr Lys Asn Asp Asn Ser Pro Val Thr Thr Gly Asp
118          35          40          45
119 Tyr Ala Ala Gln Thr Ile Ile Ile Asn Ala Ile Lys Ser Asn Phe Pro
120          50          55          60
121 Asp Asp Lys Val Val Gly Glu Glu Ser Ser Ser Gly Leu Ser Asp Ala
122 65          70          75          80
123 Phe Val Ser Gly Ile Leu Asn Glu Ile Lys Ala Asn Asp Glu Val Tyr
124          85          90          95
125 Asn Lys Asn Tyr Lys Lys Asp Asp Phe Leu Phe Thr Asn Asp Gln Phe
126          100         105         110
127 Pro Leu Lys Ser Leu Glu Asp Val Arg Gln Ile Ile Asp Phe Gly Asn
128          115         120         125
129 Tyr Glu Gly Gly Arg Lys Gly Arg Phe Trp Cys Leu Asp Pro Ile Asp
130          130         135         140
131 Gly Thr Lys Gly Phe Leu Arg Gly Glu Gln Phe Ala Val Cys Leu Ala
132 145         150         155         160
133 Leu Ile Val Asp Gly Val Val Gln Leu Gly Cys Ile Gly Cys Pro Asn
134          165         170         175
135 Leu Val Leu Ser Ser Tyr Gly Ala Gln Asp Leu Lys Gly His Glu Ser
136          180         185         190
137 Phe Gly Tyr Ile Phe Arg Ala Val Arg Gly Leu Gly Ala Phe Tyr Ser
138          195         200         205
139 Pro Ser Ser Asp Ala Glu Ser Trp Thr Lys Ile His Val Arg His Leu
140          210         215         220
141 Lys Asp Thr Lys Asp Met Ile Thr Leu Glu Gly Val Glu Lys Gly His
142 225         230         235         240
143 Ser Ser His Asp Glu Gln Thr Ala Ile Lys Asn Lys Leu Asn Ile Ser
144          245         250         255
145 Lys Ser Leu His Leu Asp Ser Gln Ala Lys Tyr Cys Leu Leu Ala Leu
146          260         265         270
147 Gly Leu Ala Asp Val Tyr Leu Arg Leu Pro Ile Lys Leu Ser Tyr Gln
148          275         280         285
149 Glu Lys Ile Trp Asp His Ala Ala Gly Asn Val Ile Val His Glu Ala
150          290         295         300
151 Gly Gly Ile His Thr Asp Ala Met Glu Asp Val Pro Leu Asp Phe Gly
152 305         310         315         320
153 Asn Gly Arg Thr Leu Ala Thr Lys Gly Val Ile Ala Ser Ser Gly Pro
154          325         330         335
155 Arg Glu Leu His Asp Leu Val Val Ser Thr Ser Cys Asp Val Ile Gln
156          340         345         350
157 Ser Arg Asn Ala
158          355
161 <210> SEQ ID NO: 5
162 <211> LENGTH: 1176
163 <212> TYPE: DNA
164 <213> ORGANISM: Artificial Sequence
166 <220> FEATURE:
167 <223> OTHER INFORMATION: Nucleotide sequence encoding a chimeric protein
169 <400> SEQUENCE: 5

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170 atgggcgcat cccgtgatga cgatgacctc gcccttgcat tggaaagaga attattgggt 60
171 gcaactcaag ctgtacgaaa ggcgtcttta ttgactaaga gaattcaatc tgaagtgatt 120
172 tctcacaagg actccactac tattaccaag aatgataatt ctccagtaac cacaggatgat 180
173 tatgctgcac aaacgatcat cataaatgct atcaagagca attttcctga tgataaggta 240
174 gttggtgaag aatcctcatc aggattgagc gacgcattcg tctcaggaat tttaaacgaa 300
175 ataaaagcca atgacgaagt ttataacaag aattataaaa aggatgattt tctgtttaca 360
176 aacgatcagt ttccgctaaa atctttggag gacgtcaggc aaatcatcga tttcggcaat 420
177 tacgaagggtg gtagaaaagg aagattttgg tgtttggatc ctattgacgg aaccaagggg 480
178 tttttaagag gtgaacagtt tgcagtatgt ctggccttaa ttgtggacgg tgttgttcag 540
179 cttggttgta ttggatgccc caacttagtt ttaagttctt atggggccca agatttgaaa 600
180 ggccatgagt catttggtta tatctttcgt gctgttagag gtttaggtgc cttctattct 660
181 ccactctcag atgcagagtc atggacaaa atccacgta gacacttaa agacactaaa 720
182 gacatgatta ctttagaggg agttgaaaag ggacactcct ccatgatga acaaactgct 780
183 atcaaaaaca aactaaatat atccaaatct ttgcacttgg attctcaagc caagtactgt 840
184 ttgttagcat tgggcttagc agacgtatat ttacgtctgc ctatcaaact ttcttaccaa 900
185 gaaaagatct gggaccatgc tgcaggcaac gttattgtcc atgaagctgg aggtatccat 960
186 acagatgcca tggaagatgt tcctctagac ttcggtaacg gtagaacgct agctacgaag 1020
187 ggagttatag cgtcaagtgg ccacgcgag ttacatgact tgggtggtgc tacatcatgc 1080
188 gatgtcattc agtcaagaaa cgccaagggc gagcttgaag gtttgccat ccctaaccct 1140
189 ctctccgta ccggtcatca tcaccatcac cattga 1176

```

191 &lt;210&gt; SEQ ID NO: 6

192 &lt;211&gt; LENGTH: 7

193 &lt;212&gt; TYPE: PRT

194 &lt;213&gt; ORGANISM: Artificial Sequence

196 &lt;220&gt; FEATURE:

197 &lt;223&gt; OTHER INFORMATION: Exemplary epitope tag

199 &lt;400&gt; SEQUENCE: 6

200 Asp Tyr Lys Asp Asp Asp Lys

201 1 5

204 &lt;210&gt; SEQ ID NO: 7

205 &lt;211&gt; LENGTH: 9

206 &lt;212&gt; TYPE: PRT

207 &lt;213&gt; ORGANISM: Artificial Sequence

209 &lt;220&gt; FEATURE:

210 &lt;223&gt; OTHER INFORMATION: Exemplary epitope tag

212 &lt;400&gt; SEQUENCE: 7

213 Tyr Pro Tyr Asp Val Pro Asp Tyr Ala

214 1 5

217 &lt;210&gt; SEQ ID NO: 8

218 &lt;211&gt; LENGTH: 11

219 &lt;212&gt; TYPE: PRT

220 &lt;213&gt; ORGANISM: Artificial Sequence

222 &lt;220&gt; FEATURE:

223 &lt;223&gt; OTHER INFORMATION: Exemplary epitope tag

225 &lt;400&gt; SEQUENCE: 8

226 Cys Gln Asp Leu Pro Gly Asn Asp Asn Ser Thr

227 1 5 10

230 &lt;210&gt; SEQ ID NO: 9

231 &lt;211&gt; LENGTH: 10

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Input Set : D:\46699-20011.00 - Seqlist.txt

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232 <212> TYPE: PRT
233 <213> ORGANISM: Artificial Sequence
235 <220> FEATURE:
236 <223> OTHER INFORMATION: Exemplary epitope tag
238 <400> SEQUENCE: 9
239 Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu
240 1          5          10
243 <210> SEQ ID NO: 10
244 <211> LENGTH: 6
245 <212> TYPE: PRT
246 <213> ORGANISM: Artificial Sequence
248 <220> FEATURE:
249 <223> OTHER INFORMATION: Exemplary epitope tag
251 <400> SEQUENCE: 10
252 His His His His His His
253 1          5
256 <210> SEQ ID NO: 11
257 <211> LENGTH: 6
258 <212> TYPE: PRT
259 <213> ORGANISM: Artificial Sequence
261 <220> FEATURE:
262 <223> OTHER INFORMATION: Exemplary epitope tag
264 <400> SEQUENCE: 11
265 Asp Thr Tyr Arg Tyr Ile
266 1          5
269 <210> SEQ ID NO: 12
270 <211> LENGTH: 6
271 <212> TYPE: PRT
272 <213> ORGANISM: Artificial Sequence
274 <220> FEATURE:
275 <223> OTHER INFORMATION: Exemplary epitope tag
277 <400> SEQUENCE: 12
278 Glu Tyr Met Pro Met Glu
279 1          5
282 <210> SEQ ID NO: 13
283 <211> LENGTH: 11
284 <212> TYPE: PRT
285 <213> ORGANISM: Artificial Sequence
287 <220> FEATURE:
288 <223> OTHER INFORMATION: Exemplary epitope tag
290 <400> SEQUENCE: 13
291 Ala Ser Met Thr Gly Gly Gln Gln Met Gly Arg
292 1          5          10
295 <210> SEQ ID NO: 14
296 <211> LENGTH: 10
297 <212> TYPE: PRT
298 <213> ORGANISM: Artificial Sequence
300 <220> FEATURE:
301 <223> OTHER INFORMATION: Exemplary epitope tag

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VERIFICATION SUMMARY

DATE: 03/07/2005

PATENT APPLICATION: US/10/665,883

TIME: 10:56:24

Input Set : D:\46699-20011.00 - Seqlist.txt

Output Set: N:\CRF4\03072005\J665883.raw